

Title (en)

Preparation of silver halide tabular emulsions in the presence of polar aprotic solvents and/or alcohols

Title (de)

Herstellung von tafelförmigen Silberhalogenidemulsionen in Gegenwart von polaren aprotischen Lösungsmitteln und/oder Alkoholen

Title (fr)

Préparation d'émulsion tabulaires à l'halogénure d'argent en présence de solvants polaires aprotiques et/ou alcools

Publication

EP 0723186 A1 19960724 (EN)

Application

EP 95203516 A 19951215

Priority

US 37417795 A 19950118

Abstract (en)

This invention offers a new method to produce tabular silver halide emulsions, more preferably silver bromide or silver bromoiodide emulsions, wherein crystals in said emulsion have a tabularity, defined as the ratio between aspect ratio and thickness of at least 25 and a homogeneity of said crystals in said emulsion, defined as a hundred times the ratio between the standard deviation and the average projective crystal diameter of said crystals of less than 30, characterised by the steps of adding to a reaction vessel containing at least one polar aprotic solvent a silver salt in an amount to get a concentration from 0.01 to 1 M of said silver salt and a halide salt in an amount to get a concentration 1 to 10<4> times the molar concentration of said silver salt; dissolving the said silver salt and the said halide salt; adding a protic solvent to the said reaction vessel in order to form twinned tabular nuclei; colloiddally stabilising said twinned tabular nuclei by the addition of a protective colloid apart or together with at least one protic solvent or with a mixture of at least one protic and at least one aprotic solvent, in order to obtain a ratio by weight of water to (a)protic solvent of not more than 40:60 in the reaction vessel; optionally growing said twinned tabular nuclei to tabular silver halide emulsion crystals in the same or in another reaction vessel by the addition of an aqueous soluble silver salt solution and a aqueous soluble halide salt solution; flocculating and decanting the said emulsion crystals obtained, followed by washing and redispersing or applying dialysis or ultrafiltration techniques.

IPC 1-7

G03C 1/005

IPC 8 full level

G03C 1/005 (2006.01); **G03C 1/015** (2006.01); **G03C 1/025** (2006.01); **G03C 1/035** (2006.01); **G03C 1/06** (2006.01); **G03C 1/07** (2006.01)

CPC (source: EP US)

G03C 1/0051 (2013.01 - EP US); **G03C 1/015** (2013.01 - EP US)

Citation (search report)

- [DA] US 5215879 A 19930601 - SUZUKI TETUYA [JP], et al
- [DA] US 5252453 A 19931012 - TSAUR ALLEN K [US], et al

Designated contracting state (EPC)

BE DE FR GB NL

DOCDB simple family (publication)

EP 0723186 A1 19960724; **EP 0723186 B1 19980617**; DE 69503030 D1 19980723; DE 69503030 T2 19990128; JP H08248543 A 19960927; US 5541051 A 19960730

DOCDB simple family (application)

EP 95203516 A 19951215; DE 69503030 T 19951215; JP 2197096 A 19960112; US 37417795 A 19950118